

Listing of the Claims:

1. **(currently amended)** A method of processing a bit operation instruction, comprising:

fetching and decoding a find first bit instruction;

executing the find first bit instruction on a source operand to calculate a result corresponding to the first bit position meeting the criteria of the instruction, where the find first bit instruction finds the first zero from the left side of the memory location ;

storing the result.
2. **(original)** The method according to claim 1, further comprising setting a zero flag within a status register when none of the bit positions meet the criteria of the instruction.
3. **(canceled)**
4. **(canceled)**
5. **(canceled)**
6. **(canceled)**
7. **(canceled)**

8. **(canceled)**

9. **(canceled)**

10. **(canceled)**

11. **(canceled)**

12. **(original)** The method according to claim 1, wherein the find first bit instruction specifies the source operand.

13. **(original)** The method according to claim 1, wherein the find first bit instruction specifies a byte of a memory location that stores the source operand.

14. **(currently amended)** A processor for find first instruction processing, comprising:

a program memory for storing instructions including a find first bit instruction;

a program counter for identifying current instructions for processing;

an arithmetic logic unit (ALU) for executing instructions within the program memory, the ALU including bit operation logic for executing the find first bit instruction on a source operand to calculate a result corresponding to the first bit position meeting the criteria of the instruction, wherein the find first bit instruction finds the first zero from the left side of a memory location.

15. **(original)** The processor according to claim 14, further comprising setting a zero flag within a status register when none of the bit positions meet the criteria of the instruction.

16. **(canceled)**

17. **(canceled)**

18. **(canceled)**

19. **(canceled)**

20. **(canceled)**

21. **(canceled)**

22. **(canceled)**

23. **(canceled)**

24. **(original)** The processor according to claim 22, wherein the find first bit change instruction finds the first bit change from the right side of a memory location.

25. **(new)** A method of processing a bit operation instruction, comprising:

fetching and decoding a find first bit instruction;

executing the find first changed bit instruction on a source operand to calculate a result corresponding to the first bit position meeting the criteria of the instruction; and

storing the result.

26. **(new)** The method of claim 25 where the find first changed bit instruction finds the first changed bit from the left side of the memory location.

27. **(new)** The method of claim 25 where the find first changed bit instruction finds the first changed bit from the right side of the memory location.

28. **(new)** A processor for find first instruction processing, comprising:
- a program memory for storing instructions including a find first bit instruction;
 - a program counter for identifying current instructions for processing;
- an arithmetic logic unit (ALU) for executing instructions within the program memory, the ALU including bit operation logic for executing the find first bit change instruction on a source operand to calculate a result corresponding to the first bit position meeting the criteria of the instruction.
29. **(new)** The processor according to claim 28, wherein the find first bit change instruction finds the first bit change from the left side of a memory location.
30. **(new)** The processor according to claim 28, wherein the find first bit change instruction finds the first bit change from the right side of a memory location.